Appendix 5: Detailed Envelope Simulation by AccuRate

The Empirical Validation of House Energy Rating (HER) Software for Lightweight Housing in Cool Temperate Climates

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5.1. Introduction

The software used for this empirical validation study was the CSIRO-developed AccuRate software, version 1.1.4.1. This appendix contains the input data which was used for the completion of the detailed envelope simulation. The appendix is divided into two distinct themes, as follows:

- Section 5.1 - Provides screen snapshots from the standard front-end user interface of the AccuRate V1.1.4.1 software
- Sections 5.2, 5.3 and 5.4 – List the inputs that were used for each of the detailed envelope simulations, for each of the three test cells and the resultant scratch files, which the software used for the simulation process. Each test cell had four envelope simulation types, namely: Default Fabric / Default Climate; Default Fabric / Measured Climate; As-built Fabric / Default Climate: and As-built fabric / Measured Climate.

5.2. AccuRate Data Input Window Screen Snap-shots

The figures that follow are presented in their order of required front-end data entry. A brief explanation is included with each.

On opening the program and selecting the option to create a new project, the screen (as in Figure A5.1), was displayed. This screen required administrative project information including:

- Project name
- Client Information
- Project location
- Assessor information

The information provided in the ‘Postcode’ box alloted the preset TMY climate file to the project.

Figure A5.1 – Project data tab from AccuRate V1.1.4.1

The second tab selected during the data entry process was the 'Constructions' tab, as shown in Figure A5.2. In this tab each of the fabric elements or composite elements are established by selecting elements from the in-built materials library. The construction elements defined included:

- External Walls
- Windows
- Doors
- Floors
- Ceilings
- Internal Walls
- Roof
- Skylight
- Roof Windows

The colour and solar absorptance for each internal and external surface was defined during this stage of the data input.

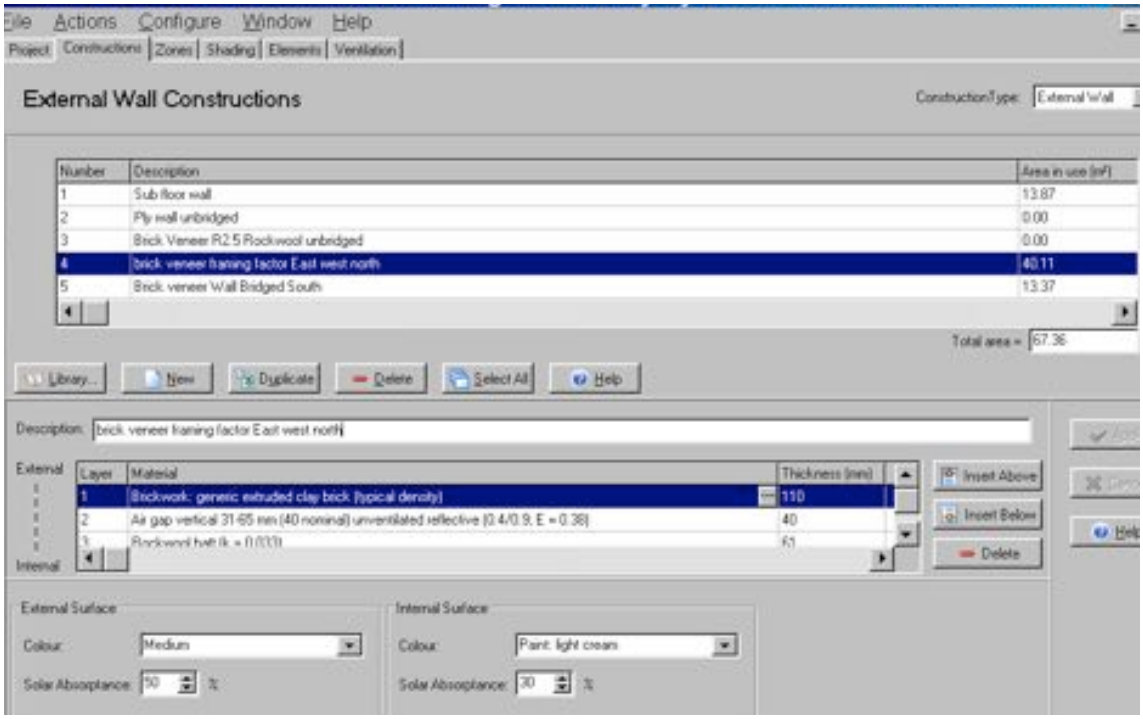

Figure A5.2 – Construction data tab from AccuRate V1.1.4.1

The zones of the building to be simulated were defined in the third tab, as in Figure A5.3. The data entry for each zone included:

- Name of zone
- The selection of a zone type from a preset list, which includes: Living room; Kitchen; Bedroom; Other day-time use; Other night-time use; Garage; Subfloor; and Roof space. Each zone type has preset values for heating and cooling requirements and internal loads.
- Defining the zone volume
- Defining the floor height of the zone, which is considered for modelling multi-storey buildings and buildings with an unconditioned subfloor
- Defining zone ceiling height
- For room type zones, breaks in the building fabric, (i.e., downlights, vents and chimneys) are defined

- For subfloor spaces the level of openness and ventilation is defined
- For roof space zone the roof surface material, ventilation and sarking elements are defined.

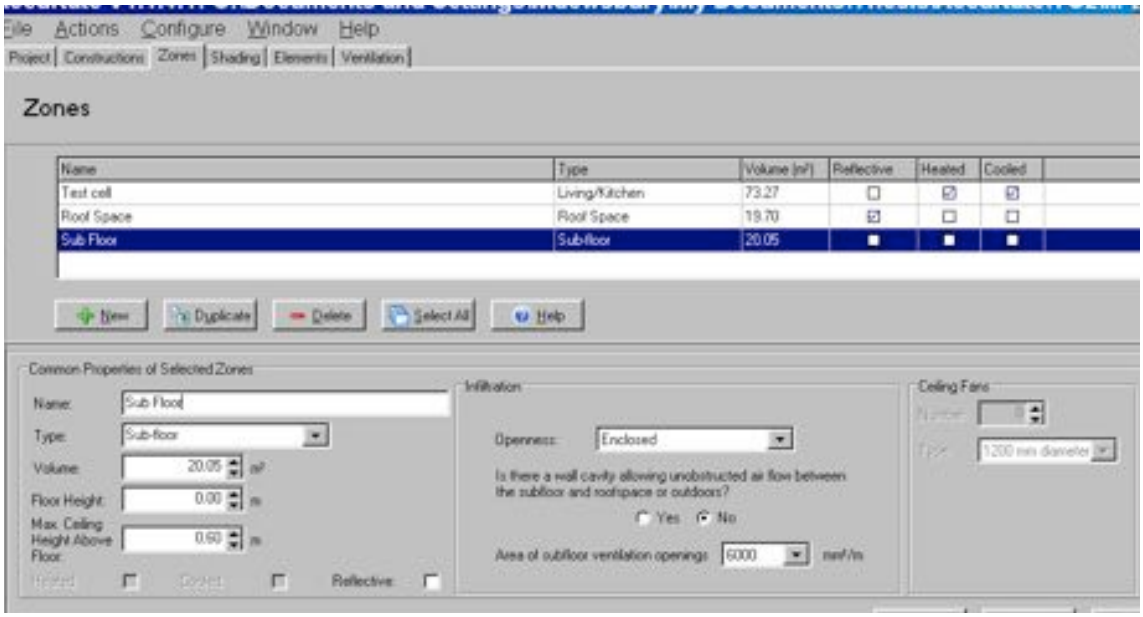

Figure A5.3 – Zone type tab from AccuRate V1.1.4.1

The fourth tab of the data entry process was for the input of shading schemes, as in Figure A5.4. Any element which is a part of the building and provides some form of shading was defined in this tab. Elements commonly include eaves and pergolas. If the building had eaves of different depths, each is defined as a different shading scheme. To allow for the recognition of plants growing on a pergola, the input allowed for the definition of a monthly shading profile. As with the eaves, if pergolas with different forms are included in the design, each is input as a separate shading scheme.

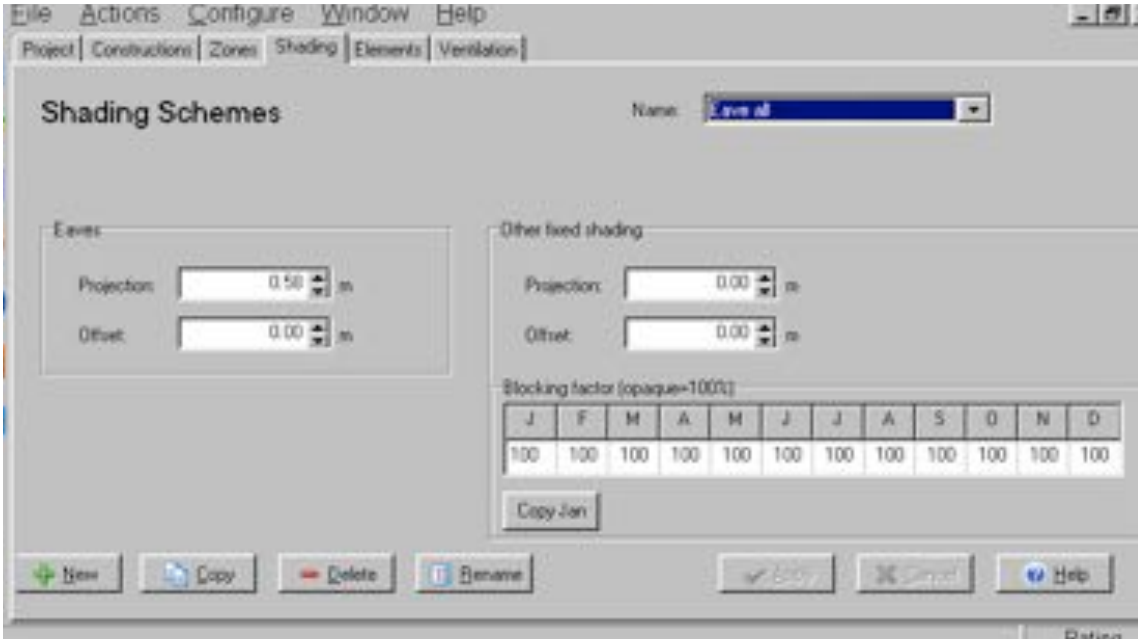

Figure A5.4 – Shading Schemes tab from AccuRate V1.1.4.1

The 'Elements' tab, as in Figure A5.5, is where the data entry entered a new level of complexity and is the area which occupied the most time during the data entry process. This tab required input of each zone or room within the software, where each had floor, walls, ceiling, doors and windows defined. The construction elements established previously are attributed to each element defined, as follows:

- external walls data input included: length; height; azimuth; allocation of shading scheme; openings; wing walls; external screens (nearby buildings or significant landscape elements); doors in wall; and windows in wall
- internal wall data input included: length; height; adjoining zone; and openings between zones
- floor data input included: area and the specification of the space below the floor
- ceiling data input included: area and the specification of the space above the ceiling
- roof elements data input included: area; pitch; azimuth; and type of exposure

The data input for each window or door within an external wall included the locating of the aperture within the wall.

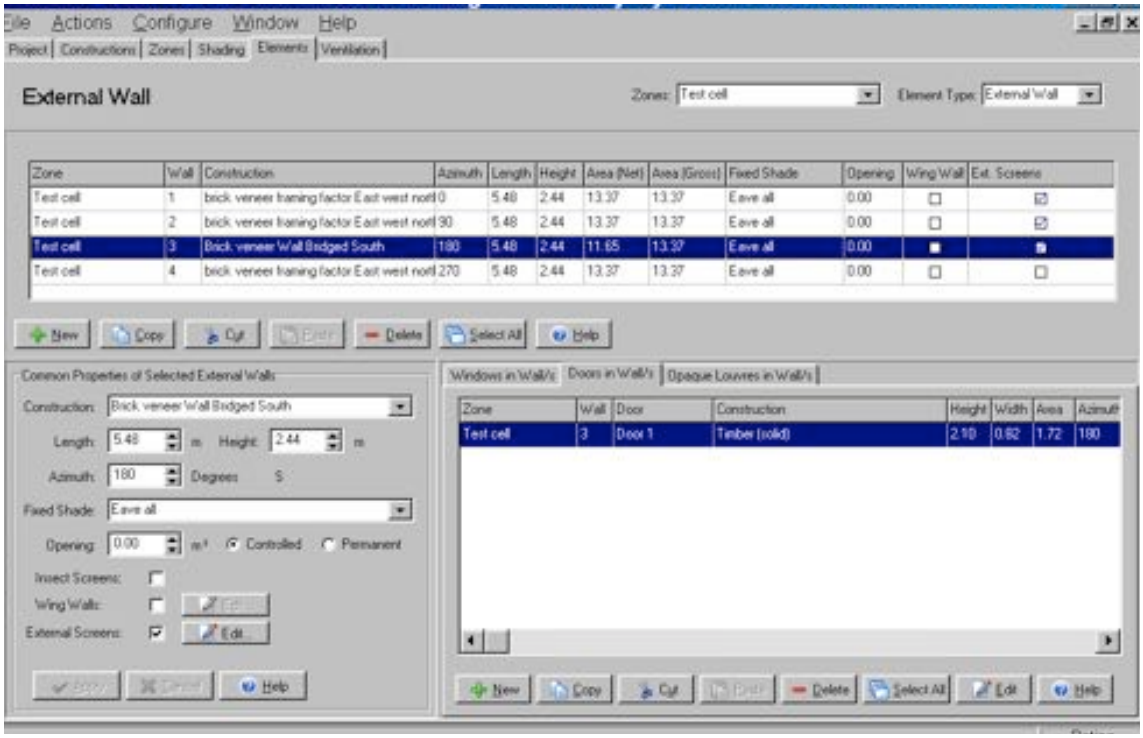

Figure A5.5 – Elements tab from AccuRate V1.1.4.1

The final tab of the data entry process was the 'Ventilation' tab as in Figure A5.6. This tab required the operator to simplify the building form to that of a rectangle or square and to nominate the orientation of the building. The effect of these two inputs was used by the software for ventilation and infiltration modelling (Clarke 2001; Delsante 2005-2010). Note that care must be taken with the choice of orientation, because if the data entry process had included the true orientation or azimuth of all external walls, any modification here would change all previously input values, thus affecting the entire simulation.

Now that the data entry had been completed some simple steps were followed to perform the simulation and produce a star rating report, namely:

- The selection of the orange tick button on the left side of the data input window (Figure A5.6) enacted a checking program that forced the software to list any input errors that the software recognised. If no errors are recognised, no report is displayed.

- The selection of the calculator button on the left side of the data input window (Figure A5.6) invoked the simulation to perform the envelope simulation, energy use calculations and to produce a star rating report.
-

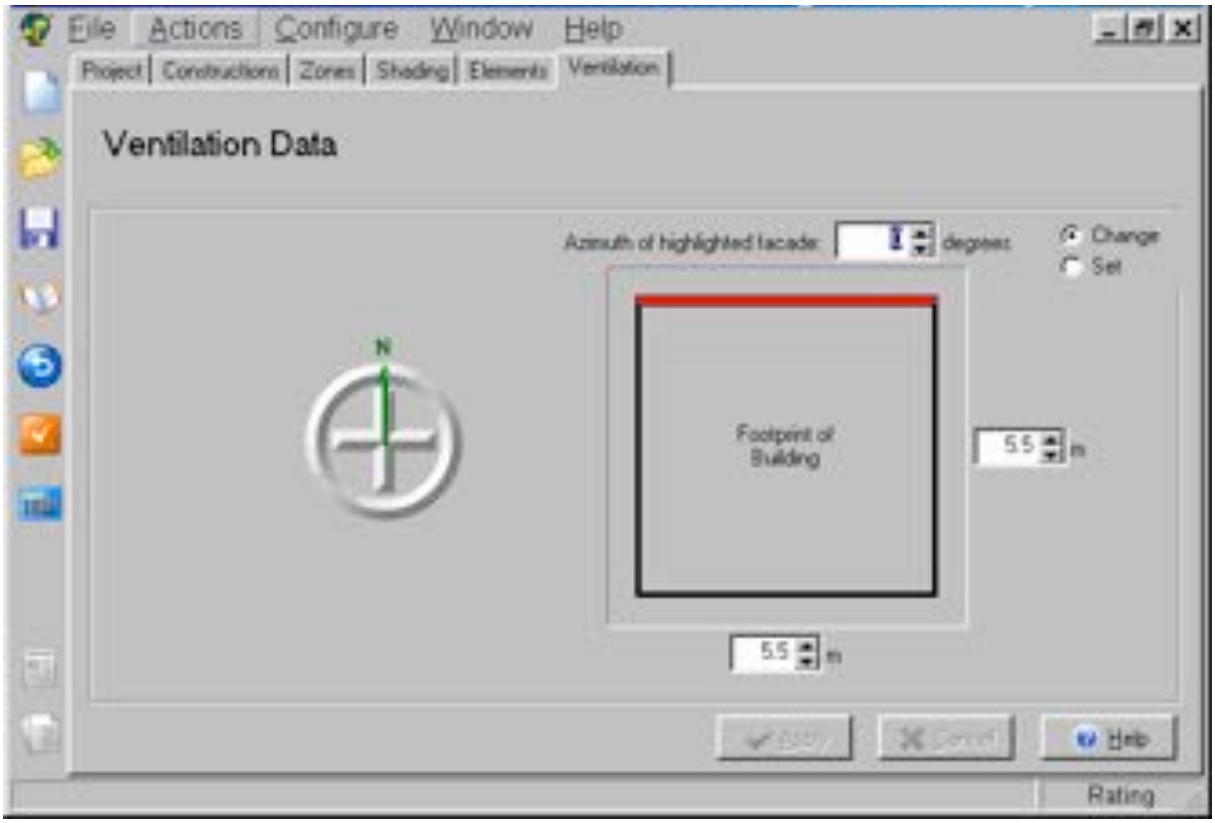

Figure A5.6 – Ventilation tab from AccuRate V1.1.4.1

For this research, the energy calculation and star rating report were not examined. The envelope simulation produced a zone temperature report which was used for comparison to the measured zone temperatures, as discussed in Section 4.4.

5.3. AccuRate Data Input Requirements for the Test Cells

Standard user interface and other non-standard inputs were completed to make the input data suitable for the detailed simulation for empirical validation purposes (Lomas 1994; LomasEppel et al. 1994; LomasMartin et al. 1994). The data inputs that were required for each test cell are listed in Tables A5.1 to A5.3. The method of modifying the construction

resistance values for the 'as-built fabric' simulations, (based on the calculation of the framing factor), is shown in Figure A5.7. The thickness of the insulation material was adjusted as per the calculation method discussed in Section 4.4.5.

Table A5.1: Built elements data input requirements for the unenclosed-perimeter platform-floored test cell

Subfloor	External Wall	Not Applicable
	External Wall Fixed Shading	Not Applicable
	External Wing Walls	Not Applicable
	External Screens	Not Applicable
	Internal Wall	Not Applicable
	Floor	Not Applicable
	Ceiling	Not Applicable
	Doors in Walls	Not Applicable
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Test Cell Room	External Walls	Applicable
	External Wall Fixed Shading	Applicable - Eaves
	External Wing Walls	Not Applicable
	External Screens	Applicable – Nearby buildings and trees
	Internal Wall	Not Applicable
	Floor	Applicable
	Ceiling	Applicable
	Doors in Walls	Applicable – Access door in southern wall
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Roof Space	External Walls	Not Applicable
	External Wall Fixed Shading	Not Applicable
	External Wing Walls	Not Applicable
	External Screens	Not Applicable
	Internal Wall	Not Applicable

	Floor	Applicable – Test cell ceiling
	Ceiling	Not Applicable
	Doors in Walls	Not Applicable
	Windows in Walls	Not Applicable
	Roof	Applicable

Table A5.2: Built elements data input requirements for the enclosed-perimeter platform-floored test cell

Subfloor	External Wall	Applicable
	External Wall Fixed Shading	Applicable
	External Wing Walls	Not Applicable
	External Screens	Applicable - Nearby buildings and trees
	Internal Wall	Not Applicable
	Floor	Applicable - Ground
	Ceiling	Applicable – Test cell floor
	Doors in Walls	Applicable – Access door in northern wall
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Test Cell Room	External Walls	Applicable
	External Wall Fixed Shading	Applicable - Eaves
	External Wing Walls	Not Applicable
	External Screens	Applicable – Nearby buildings and trees
	Internal Wall	Not Applicable
	Floor	Applicable
	Ceiling	Applicable
	Doors in Walls	Applicable – Access door in southern wall
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Roof Space	External Walls	Not Applicable
	External Wall Fixed Shading	Not Applicable
	External Wing Walls	Not Applicable

	External Screens	Not Applicable
	Internal Wall	Not Applicable
	Floor	Applicable – Test cell ceiling
	Ceiling	Not Applicable
	Doors in Walls	Not Applicable
	Windows in Walls	Not Applicable
	Roof	Applicable

Table A5.3: Built elements data input requirements for the concrete slab-on-ground floored test cell

Subfloor	External Wall	Not Applicable
	External Wall Fixed Shading	Not Applicable
	External Wing Walls	Not Applicable
	External Screens	Not Applicable
	Internal Wall	Not Applicable
	Floor	Not Applicable
	Ceiling	Not Applicable
	Doors in Walls	Not Applicable
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Test Cell Room	External Walls	Applicable
	External Wall Fixed Shading	Applicable - Eaves
	External Wing Walls	Not Applicable
	External Screens	Applicable – Nearby buildings and trees
	Internal Wall	Not Applicable
	Floor	Applicable
	Ceiling	Applicable
	Doors in Walls	Applicable – Access door in southern wall
	Windows in Walls	Not Applicable
	Roof	Not Applicable
Roof Space	External Walls	Not Applicable
	External Wall Fixed Shading	Not Applicable

	External Wing Walls	Not Applicable
	External Screens	Not Applicable
	Internal Wall	Not Applicable
	Floor	Applicable – Test cell ceiling
	Ceiling	Not Applicable
	Doors in Walls	Not Applicable
	Windows in Walls	Not Applicable
	Roof	Applicable

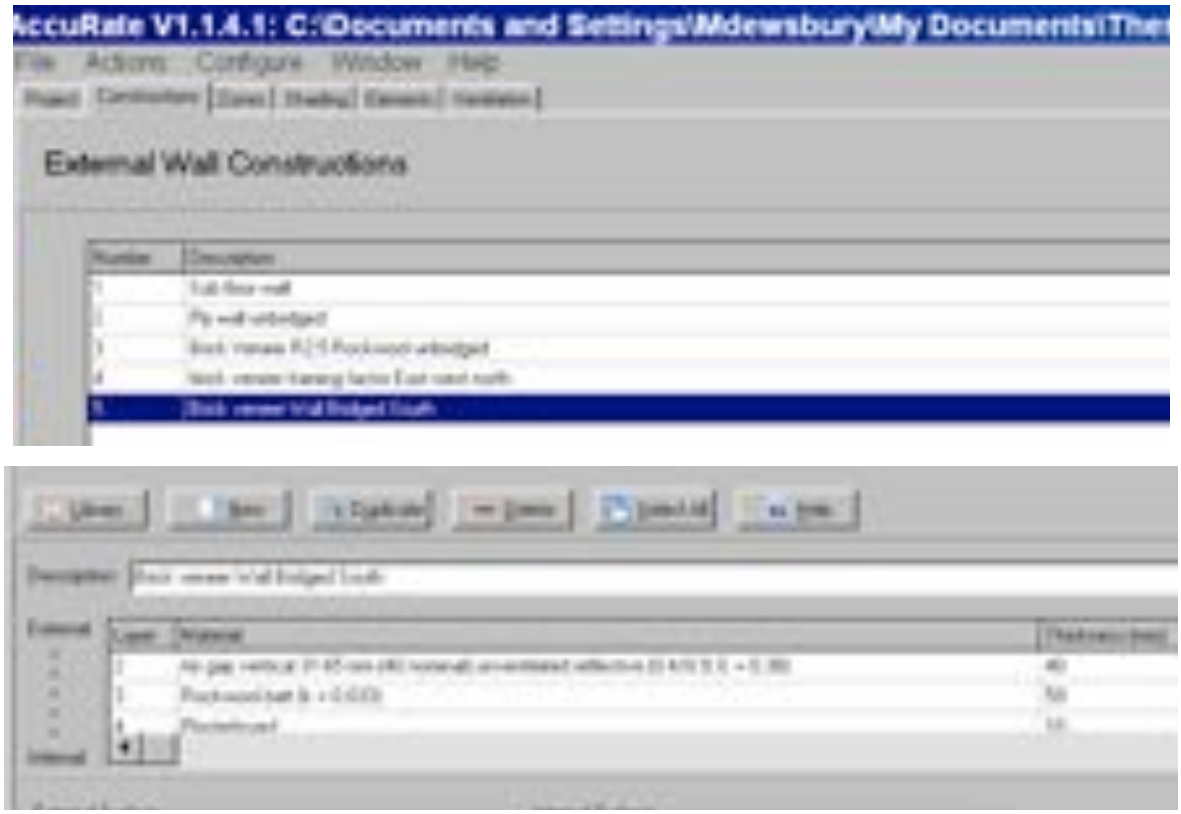

Figure A5.7 – Amendment to resistance value
(Southern wall of enclosed-perimeter platform floored test cell)

5.3.1. Input Data: Unenclosed-perimeter Platform-floored Test Cell

Table A5.4: Default fabric inputs for the unenclosed-perimeter platform-floored test cell

Project Information		
Postcode	7250	Default climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls	Plywood Veneer Wall: 12mm Plywood, Air gap vertical 17-30mm (20 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt R2.5, Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door - Room	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Ceiling	Plasterboard ceiling: Glass Fibre Batt R4.0, Plasterboard 10mm	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%
Floor	Timber with no carpet: 19mm Particle Board	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: medium; Solar Absorptance: 50%
Internal Wall	NIL	
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)	
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%
	Internal Surface	Colour: Light; Solar Absorptance: 30%
Skylight	Nil	
Roof Window	Nil	
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3 Floor Height: 0.750m

		Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil			
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard			
Shading	Type 1: All walls	710mm: Offset 0mm (at ceiling height)			
Elements					
Test Cell	External walls	Wall 1: Plywood	Wall 2: Plywood	Wall 3: Plywood	Wall 4: Plywood
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art Far	Old Art	Nil
	Height	7.0m	3.6m	4.2m	
	Width	44.0m	12.0m	48.0m	
	Distance	21.5m	48.5m	21.5m	
	H.Offset	54.5m	28.5m	-48.0m	
	V. Offset	-1.0m	-1.0m	-1.0m	
	Blocking Factor	100% all	100% all	100% all	
	- Screen 2	Nil	Old Art Close	Tree SE	Nil

	Height	Nil	3.6m	11.0m	
	Width	Nil	37.0m	21.0m	
	Distance	Nil	65.0m	32.5m	
	H.Offset	Nil	17.0m	-4.5m	
	V. Offset	Nil	-1.0m	1.0m	
	Blocking Factor	Nil	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
	- Screen 3	Nil	Workshop	Test Cell 2	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	nil	23.5m	7.5m	
	H.Offset	nil	-8.5m	-1.0m	
	V. Offset	nil	-1.0m	-1.0m	
	Blocking Factor	nil	100% all	100% all	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: Particle board with no carpet Area: 30.03m2 Under Floor: Outdoor Air Opening: Nil			
Test Cell	Ceiling	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	12.73m^2	12.73m^2	12.73m^2	12.73m^2

	Azimuth	0^0	90^0	180^0	270^0
	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal
Ventilation	Azimuth of front façade: 0^0				
	Building Footprint: 5.5m x 5.5m				

Table A5.5: As-built fabric inputs for the unenclosed-perimeter platform-floored test cell

Project Information		
Postcode	7250	Empirical climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls	Plywood Veneer Wall Bridged (east, north, west): 12mm Plywood, Air gap vertical 17-30mm (20 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt 57mm (K=0.033), Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
	Plywood Veneer Wall Bridged (south): 12mm Plywood, Air gap vertical 17-30mm (20 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt 56mm (K=0.033), Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door - Room	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Ceiling	Plasterboard ceiling Bridged; Glass Fibre Batt 158mm (K=0.044), Plasterboard 10mm	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%
Floor	Timber with no carpet Bridged: 21mm Particle Board	

	Top Surface	Colour: medium; Solar Absorptance: 50%			
	Bottom Surface	Colour: medium; Solar Absorptance: 50%			
Internal Wall	NIL				
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)				
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%			
	Internal Surface	Colour: Light; Solar Absorptance: 30%			
Skylight	Nil				
Roof Window	Nil				
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3 Floor Height: 0.750m Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil			
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard			
Shading	Type 1: All walls	710mm: Offset 0mm (at ceiling height)			
Elements					
Test Cell	External walls	Wall 1: Plywood	Wall 2: Plywood	Wall 3: Plywood	Wall 4: Plywood
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil

	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art Far	Old Art	Nil
	Height	7.0m	3.6m	4.2m	
	Width	44.0m	12.0m	48.0m	
	Distance	21.5m	48.5m	21.5m	
	H.Offset	54.5m	28.5m	-48.0m	
	V. Offset	-1.0m	-1.0m	-1.0m	
	Blocking Factor	100% all	100% all	100% all	
	- Screen 2	Nil	Old Art Close	Tree SE	Nil
	Height	Nil	3.6m	11.0m	
	Width	Nil	37.0m	21.0m	
	Distance	Nil	65.0m	32.5m	
	H.Offset	Nil	17.0m	-4.5m	
	V. Offset	Nil	-1.0m	1.0m	
	Blocking Factor	Nil	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
	- Screen 3	Nil	Workshop	Test Cell 2	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	nil	23.5m	7.5m	
	H.Offset	nil	-8.5m	-1.0m	
	V. Offset	nil	-1.0m	-1.0m	
	Blocking Factor	nil	100% all	100% all	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: Particle board with no carpet Bridged Area: 30.03m2 Under Floor: Outdoor Air Opening: Nil			
Test Cell	Ceiling	Type: Plasterboard ceiling Bridged Area: 30.03m2			

		Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard ceiling Bridged Area: 30.03m2 Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	$12.73m^2$	$12.73m^2$	$12.73m^2$	$12.73m^2$
	Azimuth	0^0	90^0	180^0	270^0
	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal
Ventilation	Azimuth of front façade: 0^0				
	Building Footprint: 5.5m x 5.5m				

Table A5.6: Default fabric scratch file modifications for the unenclosed-perimeter platform-floored test cell

Infiltration Rates			
	A	B	
Test Cell Room	Default	Default	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Roof	Default	Default	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

Table A5.7: As-built fabric scratch file modifications for the unenclosed-perimeter platform-floored test cell

Infiltration Rates			
	A	B	
Test Cell Room	0.023	0.008	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Roof	1.260	0.700	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

5.3.2. Input Data: Enclosed-perimeter Platform-floored Platform Floored Test Cell

Table A5.8: Default fabric inputs for the enclosed-perimeter platform-floored test cell

Project Information		
Postcode	7250	Empirical climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls	Subfloor wall 110mm Generic extruded clay brick	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
External Walls	Brick Veneer Wall: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt R2.5, Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door - Room	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Door – Subfloor	12mm Plywood	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Ceiling	Plasterboard ceiling: Glass Fibre Batt R4.0,Plasterboard 10mm	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%
Floor	Timber with no carpet: 19mm Particle Board	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: medium; Solar Absorptance: 50%
Ground	Bare Ground	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Dark; Solar Absorptance: 85%

Internal Wall	NIL				
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)				
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%			
	Internal Surface	Colour: Light; Solar Absorptance: 30%			
Skylight	Nil				
Roof Window	Nil				
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3 Floor Height: 0.60 Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil			
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard			
	Subfloor	Usage: Subfloor Volume: (5.78 x 5.78) x 0.6 = 20.05m^3 Floor Height: 0.00 Maximum Ceiling Height: 0.60mm Infiltration: Openness – Enclosed Wall Cavity Air Flow: No Area of Subfloor Ventilation: 6000mm^2/m Ceiling Fans: Nil			
Shading	Type 1: All walls	580mm: Offset 0mm (at ceiling height)			
	Type 2: Subfloor	580mm: Offset 2400mm			
Elements					
Subfloor	External walls	Wall 1: 110 Clay Brick	Wall 2: 110 Clay Brick	Wall 3: 110 Clay Brick	Wall 4: 110 Clay Brick
	Length	5.78m	5.78m	5.78m	5.78m

	Height	0.6	0.6m	0.6m	0.6m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Subfloor eave	Subfloor eave	Subfloor eave	Subfloor eave
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Plywood Door $0.37m^2$	Nil
Subfloor	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	35.5m	66.0m	17.0m	
	H.Offset	55.6m	3.5m	13.5m	
	V. Offset	-1.0m	0.0m	0.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 1	Old Art Close	Tree SE	Nil
	Height	4.2m	3.6m	11.0m	
	Width	5.75m	12.0m	21.0m	
	Distance	7.5m	50.0m	19.0m	
	H.Offset	1.0m	15.0m	-6.0m	
	V. Offset	-0.4m	0.0m	2.0m	
	Blocking Factor	100% all	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
	- Screen 3	Nil	Workshop	Test Cell 3	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	nil	25.0m	7.5m	
	H.Offset	nil	-22.5m	-1.0m	
	V. Offset	nil	0.0m	0.3m	
	Blocking Factor	nil	100% all	100% all	

Subfloor	Internal Walls	Nil			
Subfloor	Floor	Type: Bare Ground Area: 33.41m2 Under Floor: Not Applicable Edge Insulation: Nil			
Subfloor	Ceiling	Type: Particle board 19mm Area: 30.03m2 Above Ceiling: Test Cell			
Subfloor	Roof	Nil			
Test Cell	External walls	Wall 1: Brick Veneer	Wall 2: Brick Veneer	Wall 3: Brick Veneer	Wall 4: Brick Veneer
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	35.5m	66.0m	17.0m	
	H.Offset	55.6m	3.5m	13.5m	
	V. Offset	-1.6m	-0.6m	-0.6m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 1	Old Art Close	Tree SE	Nil
	Height	4.2m	3.6m	11.0m	
	Width	5.75m	12.0m	21.0m	
	Distance	7.5m	50.0m	19.0m	

	H.Offset	1.0m	15.0m	-6.0m	
	V. Offset	-1.0m	-0.6m	1.40m	
	Blocking Factor	100% all	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
	- Screen 3	Nil	Workshop	Test Cell 3	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	Nil	25.0m	7.5m	
	H.Offset	Nil	-22.5m	-1.0m	
	V. Offset	Nil	-0.6m	-0.3m	
	Blocking Factor	Nil	100% all	100% all	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: Particle board 19mm Area: 30.03m2 Under Floor: Subfloor Edge Insulation: Nil			
Test Cell	Ceiling	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	$12.73m^2$	$12.73m^2$	$12.73m^2$	$12.73m^2$
	Azimuth	0^0	90^0	180^0	270^0
	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal

Ventilation	Azimuth of front façade: 0^0
	Building Footprint: 5.5m x 5.5m

Table A5.9: As-built fabric inputs for the enclosed-perimeter platform-floored test cell

Project Information		
Postcode	7250	Empirical climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls	Subfloor wall 110mm Generic extruded clay brick	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
External Walls	Brick Veneer Wall – East, West, North: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt 61mm (K-0.033), Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
	Brick Veneer Wall – South: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt 59mm (K-0.033), Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Door – Subfloor	12mm Plywood	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Ceiling	Plasterboard ceiling: Glass Fibre Batt 158mm (K= 0.044), Plasterboard 10mm	

	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%
Floor	Timber with no carpet: Particle Board 21mm (K=0.120)	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: medium; Solar Absorptance: 50%
Ground	Bare Ground	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Dark; Solar Absorptance: 85%
Internal Wall	NIL	
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)	
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Skylight	Nil	
Roof Window	Nil	
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3 Floor Height: 0 Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard
	Subfloor	Usage: Subfloor Volume: (5.78 x 5.78) x 0.6 = 20.05m^3 Floor Height: 0.00 Maximum Ceiling Height: 0.60mm Infiltration: Openness – Enclosed Wall Cavity Air Flow: No Area of Subfloor Ventilation: 6000mm^2/m Ceiling Fans: Nil

Shading	Type 1: All walls	580mm: Offset 0mm (at ceiling height)			
	Type 2: Subfloor	580mm: Offset 2400mm			
Elements					
Subfloor	External walls	Wall 1: 110 Clay Brick	Wall 2: 110 Clay Brick	Wall 3: 110 Clay Brick	Wall 4: 110 Clay Brick
	Length	5.78m	5.78m	5.78m	5.78m
	Height	0.6	0.6m	0.6m	0.6m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Subfloor eave	Subfloor eave	Subfloor eave	Subfloor eave
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Plywood Door $0.37m^2$	Nil
Subfloor	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	35.5m	66.0m	17.0m	
	H.Offset	55.6m	3.5m	13.5m	
	V. Offset	-1.0m	0.0m	0.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 1	Old Art Close	Tree SE	Nil
	Height	4.2m	3.6m	11.0m	
	Width	5.75m	12.0m	21.0m	
	Distance	7.5m	50.0m	19.0m	
	H.Offset	1.0m	15.0m	-6.0m	
	V. Offset	-0.4m	0.0m	2.0m	
	Blocking Factor	100% all	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	

	- Screen 3	Nil	Workshop	Test Cell 3	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	nil	25.0m	7.5m	
	H.Offset	nil	-22.5m	-1.0m	
	V. Offset	nil	0.0m	0.3m	
	Blocking Factor	nil	100% all	100% all	
Subfloor	Internal Walls	Nil			
Subfloor	Floor	Type: Bare Ground Area: 33.41m2 Under Floor: Not Applicable Edge Insulation: Nil			
Subfloor	Ceiling	Type: Timber with no carpet Area: 30.03m2 Above Ceiling: Test Cell			
Subfloor	Roof	Nil			
Test Cell	External walls	Wall 1: Brick Veneer	Wall 2: Brick Veneer	Wall 3: Brick Veneer	Wall 4: Brick Veneer
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	35.5m	66.0m	17.0m	

	H.Offset	55.6m	3.5m	13.5m	
	V. Offset	-1.6m	-0.6m	-0.6m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 1	Old Art Close	Tree SE	Nil
	Height	4.2m	3.6m	11.0m	
	Width	5.75m	12.0m	21.0m	
	Distance	7.5m	50.0m	19.0m	
	H.Offset	1.0m	15.0m	-6.0m	
	V. Offset	-1.0m	-0.6m	1.40m	
	Blocking Factor	100% all	100% all	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
	- Screen 3	Nil	Workshop	Test Cell 3	Nil
	Height	Nil	7.0m	3.6m	
	Width	Nil	26.0m	7.0m	
	Distance	Nil	25.0m	7.5m	
	H.Offset	Nil	-22.5m	-1.0m	
	V. Offset	Nil	-0.6m	-0.3m	
	Blocking Factor	Nil	100% all	100% all	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: 21mm Particle Board Area: 30.03m2 Under Floor: Subfloor Edge Insulation: Nil			
Test Cell	Ceiling	Type: Plasterboard with 158mm Glass Wool Insulation Area: 30.03m2 Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard with 158mm Glass Wool Insulation Area: 30.03m2			

		Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	12.73m^2	12.73m^2	12.73m^2	12.73m^2
	Azimuth	0^0	90^0	180^0	270^0
	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal
Ventilation	Azimuth of front façade: 0^0				
	Building Footprint: 5.5m x 5.5m				

Table A5.10: Default fabric scratch file modifications for the enclosed-perimeter platform-floored test cell

Infiltration Rates			
	A	B	
Test Cell Subfloor	Default	Default	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Room	Default	Default	
Test Cell Roof	Default	Default	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

Table A5.11: As-built fabric scratch file modifications for the enclosed-perimeter platform-floored test cell

Infiltration Rates			
	A	B	
Test Cell Subfloor	3.292	1.910	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Room	0.000	0.021	
Test Cell Roof	0.400	0.258	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

5.3.3. Input Data: Concrete Slab-on-ground Floored Test Cell

Table A5.12: Default fabric inputs for the concrete slab-on-ground floored test cell

Project Information		
Postcode	7250	Empirical climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls	Brick Veneer Wall: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt R2.5, Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 60%
	Internal Surface	Colour: medium; Solar Absorptance: 60%
Floor/Ceiling	Plasterboard ceiling: Glass Fibre Batt R4.0, Plasterboard 10mm	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%
	Concrete Slab Floor with no Carpet: Concrete Standard (2400kg/m^3) 100mm	
	Top Surface	Colour: Concrete Dry; Solar Absorptance: 62%
	Bottom Surface	Colour: Concrete Dry; Solar Absorptance: 62%
Internal Wall	NIL	
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)	
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%
	Internal Surface	Colour: light; Solar Absorptance: 30%
Skylight	Nil	
Roof Window	Nil	
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3

		Floor Height: 0 Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil			
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard			
Shading	Type 1: All walls	580mm at ceiling height			
Elements					
Test Cell	External walls	Wall 1: Brick Veneer	Wall 2: Brick Veneer	Wall 3: Brick Veneer	Wall 4: Brick Veneer
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil
	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	49.0m	67.0m	4.0m	
	H.Offset	56.6m	-10.0m	12.5m	
	V. Offset	-1.0m	0.0m	0.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 2	Old Art Clos	Tree SE	Nil
	Height	3.6m	3.6m	11.0m	

	Width	6.33m	12.0m	10.0m	
	Distance	7.5m	51.0m	6.5m	
	H.Offset	1.0m	0.0m	-18.0m	
	V. Offset	-0.3m	0m	2.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 3	Nil	Trees	Tree S	Nil
	Height		11.0m	11.0m	
	Width		10.0m	10.0m	
	Distance		6.0m	4.5m	
	H.Offset		9.5m	-7.0m	
	V. Offset		2.0m	2.0m	
	Blocking Factor		95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: Concrete Slab Floor with no Carpet Area: 30.03m2 Under Floor: Ground Edge Insulation: Nil			
Test Cell	Ceiling	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard with R4.0 Insulation Area: 30.03m2 Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	12.73m^2	12.73m^2	12.73m^2	12.73m^2
	Azimuth	0^0	90^0	180^0	270^0

	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal
Ventilation	Azimuth of front façade: 0^0				
	Building Footprint: 5.5m x 5.5m				

Table A5.13: As-built fabric inputs for the concrete slab-on-ground floored test cell

Project Information		
Postcode	7250	Empirical climate file in use
Exposure	Open	Normal countryside with some trees and scattered buildings
Constructions		
External Walls Bridged North, East , West.	Bridged Brick Veneer Wall: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt (K = 0.033) 61mm, Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 60%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
External Walls Bridged South	Bridged Brick Veneer Wall: 110mm Generic extruded clay brick, Air gap vertical 31-65mm (40 nominal) unventilated reflective (0.4/0.9; E = 0.38), Rock wool batt (K = 0.033) 59mm, Plasterboard 10mm	
	External Surface	Colour: medium; Solar Absorptance: 60%
	Internal Surface	Colour: Paint light cream; Solar Absorptance: 30%
Windows	NIL	
Door	Timber Mountain Ash 40mm	
	External Surface	Colour: medium; Solar Absorptance: 50%
	Internal Surface	Colour: medium; Solar Absorptance: 50%
Ceiling - Bridged	Bridged Plasterboard ceiling: Glass wool batt (K = 0.044) 158mm, Plasterboard 10mm	
	Top Surface	Colour: medium; Solar Absorptance: 50%
	Bottom Surface	Colour: Paint light cream; Solar Absorptance: 30%

Floor	Concrete Slab Floor with no Carpet: Concrete Standard (2400kg/m^3) 100mm				
	Top Surface	Colour: Concrete Dry; Solar Absorptance: 62%			
	Bottom Surface	Colour: Concrete Dry; Solar Absorptance: 62%			
Internal Wall	NIL				
Roof	Metal Deck: Steel 1mm, Air gap 22.5^0 31-65mm (40mm nominal) ventilated reflective (0.4/0.9; E = 0.38)				
	External Surface	Colour: medium; Emissivity: 0.9; Solar Absorptance: 50%			
	Internal Surface	Colour: light; Solar Absorptance: 30%			
Skylight	Nil				
Roof Window	Nil				
Zones	Test Cell	Usage: Daytime other (Free running) Volume: 5.48 x 5.48 x 2.44 = 73.27m^3 Floor Height: 0 Maximum Ceiling Height: 2440mm Infiltration: Nil Ceiling Fans: Nil			
	Roof Space	Usage: Roof Space Volume: (6.88 x 6.88)/3 x 1.25 = 19.7m^3 Reflective: Yes Sarking: Sarked Roof Surface: Continuous metal deck Openness: Standard			
Shading	Type 1: All walls	580mm at ceiling height			
Elements					
Test Cell	External walls	Wall 1: External Walls E, W, N	Wall 2: External Walls E, W, N	Wall 3: External Walls South	Wall 4: External Walls E, W, N
	Length	5.48m	5.48m	5.48m	5.48m
	Height	2.44m	2.44m	2.44m	2.44m
	Azimuth	0^0	90^0	180^0	270^0
	Fixed Shading	Eave All	Eave All	Eave All	Eave All
	Opening	Nil	Nil	Nil	Nil
	Insect Screens	Nil	Nil	Nil	Nil

	Wing Walls	Nil	Nil	Nil	Nil
	Windows in wall	Nil	Nil	Nil	Nil
	Doors in wall	Nil	Nil	Door 1.72m^2	Nil
Test Cell	External Screens				
	- Screen 1	Old Art	Old Art dist	Trees SW	Nil
	Height	7.0m	3.6m	6.0m	
	Width	44.0m	37.0m	9.0m	
	Distance	49.0m	67.0m	4.0m	
	H.Offset	56.6m	-10.0m	12.5m	
	V. Offset	-1.0m	0.0m	0.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 2	Test Cell 2	Old Art Clos	Tree SE	Nil
	Height	3.6m	3.6m	11.0m	
	Width	6.33m	12.0m	10.0m	
	Distance	7.5m	51.0m	6.5m	
	H.Offset	1.0m	0.0m	-18.0m	
	V. Offset	-0.3m	0m	2.0m	
	Blocking Factor	100% all	100% all	95% all	
	- Screen 3		Trees	Tree S	Nil
	Height	Nil	11.0m	11.0m	
	Width		10.0m	10.0m	
	Distance		6.0m	4.5m	
	H.Offset		9.5m	-7.0m	
	V. Offset		2.0m	2.0m	
	Blocking Factor		95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	95, 95, 70, 50, 30, 20, 15, 15, 20, 50, 70, 95	
Test Cell	Internal Walls	Nil			
Test Cell	Floor	Type: Concrete Slab Floor with no Carpet Area: 30.03m2 Under Floor: Ground Edge Insulation: Nil			

Test Cell	Ceiling	Type: Plasterboard with Bridged Insulation Value Area: 30.03m2 Above Ceiling: Roof Space			
Test Cell	Roof	Nil			
Roof Space	External Walls	Nil			
Roof Space	Internal Walls	Nil			
Roof Space	Floor	Type: Plasterboard with Bridged Insulation Value Area: 30.03m2 Under Floor: Test Cell			
Roof Space	Ceiling	Nil			
Roof Space	Roof	Roof 1	Roof 2	Roof 3	Roof 4
	Type	Metal Deck	Metal Deck	Metal Deck	Metal Deck
	Area	12.73m^2	12.73m^2	12.73m^2	12.73m^2
	Azimuth	0^0	90^0	180^0	270^0
	Pitch	23^0	23^0	23^0	23^0
	Exposure	Normal	Normal	Normal	Normal
Ventilation	Azimuth of front façade: 0^0				
	Building Footprint: 5.5m x 5.5m				

Table A5.14: Default fabric scratch file modifications for the concrete slab-on-ground floored test cell

Infiltration Rates			
	A	B	
Test Cell Room	Default	Default	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Roof	Default	Default	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

Table A5.15: As-built fabric scratch file modifications for the concrete slab-on-ground floored test cell

Infiltration Rates			
	A	B	
Test Cell Room	0.038	0.012	The infiltration rate, in air changes per hour, is specified as A + B*v, where v is the wind speed in m/s.
Test Cell Roof	0.340	0.156	
Sensible Internal Heat Gains			
Test Cell Room	30 Watts for hours 0 to 23		Normally occupancy heat gains. In this instance it is the heat from measuring equipment.
Thermostat Settings			
Test Cell Room	0.0 deg C for hours 0 to 23		Thermostat settings for invoking cooling & heating operation

5.4. AccuRate Scratch Files

After the data entry of the Default Fabric and As-built Fabric iterations for each test cell was completed, the AccuRate software produced the scratch files to perform the envelope simulations. The simulations also included the Default Climate and Measured Climate types. This modification was made by manually swapping the climate file within the AccuRate climate library. The scratch file for each iteration is shown in the figures, as follows:

- Unenclosed-perimeter Platform-floored test cell Default Fabric Figures A5.8 to A5.12
- Unenclosed-perimeter Platform-floored test cell As-built Fabric – Figures A5.13 to A5.17
- Enclosed-perimeter Platform-floored test cell Default Fabric - Figures A5.18 to A5.23
- Enclosed-perimeter Platform-floored test cell As-built Fabric - Figures A5.24 to A5.29
- Concrete slab-on-ground floored test cell Default Fabric - Figures A5.30 to A5.34
- Concrete slab-on-ground floored test cell As-built Fabric - Figures A5.35 to A5.39

```
                                    SCRATCH TC1 Blind - Blind.txt
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c
c  20/10/09 15:50
c  Data type 1: Project data
c
 1  1                                          20/10/09            200300000000000
 1  2   C:\Program Files\AccuRate aust\WEATHER\CLIMAT23.txt
 1  3    -41.4 147.1 150.0
 1  7   output.txt
 1  9   C:\Program Files\AccuRate aust\Temperatures\2009-11-02 Test Cell 1 unbridged.tem
 1 10   energy.txt
 1 11   airflow.txt
c
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c Basic data for ventilation modelling and numerics
c
c         MaxItV  MaxIVI   ConvV  ConvVI    UrfV  RungeK  MaxItT   ConvT  MaxItG   ConvG
UrfT
 1 12        100     100 0.00100 0.01000    0.20       5     100 0.10000     100 0.00100
0.20
c Cp data
 1 13999 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50
c Shielding factor
 1 14     0.74
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c Ground model data. Ground reflectance, slab-on-ground area, perimeter, wall thickness,
cond., diffusivity, edge insul., cond. floor area
 1 15      0.2     0     0   0.2   1.5   4.6  0.00  30.0
c
c Curtain data for windows (AddedR, Trans, Abs). 20 maximum
 1 16  1 0.000 0.510 0.200
 1 16  2 0.030 0.250 0.350
 1 16  3 0.055 0.100 0.400
 1 16  4 0.110 0.250 0.350
 1 16  5 0.330 0.100 0.400
 1 16  6 0.030 0.200 0.300
 1 16  7 0.000 0.200 0.300
c
c Curtain data for roof windows (AddedR, Trans, Abs). 20 maximum
 1 17  1  0.03  0.20  0.30
c
c Outdoor blinds shading factor for windows. 999 maximum
 1 18  1 0.300
 1 18  2 0.300
 1 18  3 0.240
 1 18  4 0.200
 1 18  5 0.150
 1 18  6 0.600
 1 18  7 0.400
c
c Outdoor blinds shading factor for skylights and roof windows. 999 maximum
 1 19  1 0.800
 1 19  2 0.600
 1 19  3 0.400
 1 19  4 0.200
 1 19  5 0.000
c
c Horizontal shading schemes. 999 maximum
c Scheme no., eave proj., eave offset, pergola proj, pergola offset, pergola shading factors
c         EaveP EaveO PergP PergO
 1 20  1  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  2  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  3  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  4  0.71  0.34  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  5  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
c
c Vertical shading schemes. 999 maximum
c Left proj., left offset, right proj., right offset
c         LeftP LeftORightPRightO
c
c Screen schemes. 20 maximum
c Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
                                    Page 1
```

Figure A5.8 – Scratch file page 1: Default Fabric - Unenclosed-perimeter platform-floored test cell

```
                                    SCRATCH TC1 Blind - Blind.txt
C       Height Width  Dist  OffH  OffV
 1 22  1   7.0  44.0  21.5  54.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  2   3.6  12.0  48.5  28.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  3   3.6  37.0  65.0  17.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  4   7.0  26.0  23.5  -8.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  5   4.2  48.0  21.5 -48.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  6   4.2  48.0  21.5 -48.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  7  11.0  21.0  32.5  -4.5  -1.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  8  11.0  21.0  32.5  -4.5  -1.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  9   3.6   7.0   7.5  -1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 10   3.6   7.0   7.5  -1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23       10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26        3   2.5
CCCC
```

SCRATCH TC1 Blind - Blind.txt

```
C
C Zone  1
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  1         Test cell  73.3  0.12  0.04  0.68Normal     1
C Windows
C       Height Width  AzimHSSch1HSSch2VShSchScSch1ScSch2ScSch3 Curtn Blind
C Doors
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  1 28  2.10  0.82  1.72   180  0.50  0.50  1.00      4     0     6     8    10
C OpaqueLouvres
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFraLouvre
C Walls
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  1 21  2.44  5.48 13.37     0  0.50  0.30  1.00      1     0     1     0     0
 3  1 21  2.44  5.48 13.37    90  0.50  0.30  1.00      2     0     2     3     4
 3  1 21  2.44  5.48 11.65   180  0.50  0.30  1.00      3     0     5     7     9
 3  1 21  2.44  5.48 13.37   270  0.50  0.30  1.00      5     0     0     0     0
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  1 41 30.03  0.50
 3  1 83 30.03  0.30     4
C
C       Sensible internal heat gain (watts), [hours 1-12]
 3  1401    30    30    30    30    30    30    30    30    30    30    30    30
C       Sensible internal heat gain (watts), [hours 13-24]
 3  1402    30    30    30    30    30    30    30    30    30    30    30    30
C       Latent internal heat gain (watts), [hours 1-12]
 3  1403     0     0     0     0     0     0     0     0     0     0     0     0
C       Latent internal heat gain (watts), [hours 13-24]
 3  1404     0     0     0     0     0     0     0     0     0     0     0     0
C
C       Heating thermostat settings [hours 1-12]
 3  1501   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Heating thermostat settings [hours 13-24]
 3  1502   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 1-12]
 3  1503   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 13-24]
 3  1504   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C
C   Indoor covering closing & opening times, drawing temp, drawing solar for windows
 3  1601    18     7  25.0 200.0
C   Indoor covering closing & opening times, drawing temp, drawing solar for roof windows
 3  1602    18     7  25.0 200.0
C   Outdoor covering drawing temp, drawing solar for windows
 3  1603  22.5  75.0
C   Outdoor covering drawing temp, drawing solar for skylights and roof windows
 3  1604  22.5  75.0
C   Ventilation on & off times, on & off temps, A factor, B factor
 3  1605     0    24  22.5  22.0   0.0   0.0
C
C
C Zone  2
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG CeilZ RoofZ REmis
 3  2        Roof Space  19.7  2.00  1.00  0.68RoofSA     1     4     5  0.05
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  2 52 30.03  0.50     4
 3  2111 52.00  0.50     3
C
C
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  3   Underside of Ro   0.0  0.00  0.00  0.68Normal     1                        1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
```


Figure A5.10 – Scratch file page 3: Default Fabric - Unenclosed-perimeter platform-floored test cell

```
                                SCRATCH TC1 Blind - Blind.txt
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  3111 52.00  0.50     2
  3  3112 30.03  0.50     4
  3  3114 12.73  0.50     6
  3  3114 12.73  0.50     8
  3  3114 12.73  0.50    10
  3  3114 12.73  0.50    12
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A     B WsRed  Type EstSG
  3  4   Top of Ceilings   0.0  0.00  0.00  0.68Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  4 53 30.03  0.50     1
  3  4 82 30.03  0.50     2
  3  4112 30.03  0.50     3
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A     B WsRed  Type EstSG  BotZ
  3  5     Air Gap Top 1   0.0  0.00  0.00  0.68AirGpT     1     6                 1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
  3  5 31 12.73     0    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  5113 12.73  0.50     6
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A     B WsRed  Type EstSG
  3  6     Air Gap Bot 1   0.0  0.00  0.00  0.68Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  6114 12.73  0.50     3
  3  6113 12.73  0.50     5
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A     B WsRed  Type EstSG  BotZ
  3  7     Air Gap Top 2   0.0  0.00  0.00  0.68AirGpT     1     8                 1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
  3  7 31 12.73    90    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  7113 12.73  0.50     8
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A     B WsRed  Type EstSG
  3  8     Air Gap Bot 2   0.0  0.00  0.00  0.68Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
  3  8114 12.73  0.50     3
  3  8113 12.73  0.50     7
C
C
C Zone  9
C
                                    Page 4
```

Figure A5.11 – Scratch file page 4: Default Fabric - Unenclosed-perimeter platform-floored test cell

```
                                SCRATCH TCl Blind - Blind.txt
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG  BotZ
 3  9     Air Gap Top 3   0.0  0.00  0.00  0.68AirGpT     1    10                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  9 31 12.73   180    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  9113 12.73  0.50    10
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG
 3 10     Air Gap Bot 3   0.0  0.00  0.00  0.68Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 10114 12.73  0.50     3
 3 10113 12.73  0.50     9
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG  BotZ
 3 11     Air Gap Top 4   0.0  0.00  0.00  0.68AirGpT     1    12                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 11 31 12.73   270    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 11113 12.73  0.50    12
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG
 3 12     Air Gap Bot 4   0.0  0.00  0.00  0.68Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 12114 12.73  0.50     3
 3 12113 12.73  0.50    11
C
 9
```

Figure A5.12 – Scratch file page 5: Default Fabric - Unenclosed-perimeter platform-floored test cell

```
                                        SCRATCH TC1 as built.txt
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c
c  20/10/09 16:12
c  Data type 1: Project data
c
 1  1                                          20/10/09            200300000000000
 1  2   C:\Program Files\AccuRate aust\WEATHER\CLIMAT23.txt
 1  3    -41.4 147.1 150.0
 1  7   output.txt
 1  9   C:\Program Files\AccuRate aust\Temperatures\2009-11-02 Test Cell 1 bridged.tem
 1 10   energy.txt
 1 11   airflow.txt
c
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c Basic data for ventilation modelling and numerics
c
c         MaxItV  MaxIVI   ConvV  ConvVI    UrfV  RungeK  MaxItT   ConvT  MaxItG   ConvG
UrfT
  1 12        100     100 0.00100 0.01000    0.20       5     100 0.10000     100 0.00100
0.20
c Cp data
  1 13999 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50
c Shielding factor
  1 14     0.74
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c Ground model data. Ground reflectance, slab-on-ground area, perimeter, wall thickness,
cond., diffusivity, edge insul., cond, floor area
  1 15      0.2     0     0   0.2   1.5   4.6  0.00  30.0
c
c Curtain data for windows (AddedR, Trans, Abs). 20 maximum
  1 16  1 0.000 0.510 0.200
  1 16  2 0.030 0.250 0.350
  1 16  3 0.055 0.100 0.400
  1 16  4 0.110 0.250 0.350
  1 16  5 0.330 0.100 0.400
  1 16  6 0.030 0.200 0.300
  1 16  7 0.000 0.200 0.300
c
c Curtain data for roof windows (AddedR, Trans, Abs). 20 maximum
  1 17  1  0.03  0.20  0.30
c
c Outdoor blinds shading factor for windows. 999 maximum
  1 18  1 0.300
  1 18  2 0.300
  1 18  3 0.240
  1 18  4 0.200
  1 18  5 0.150
  1 18  6 0.600
  1 18  7 0.400
c
c Outdoor blinds shading factor for skylights and roof windows. 999 maximum
  1 19  1 0.800
  1 19  2 0.600
  1 19  3 0.400
  1 19  4 0.200
  1 19  5 0.000
c
c Horizontal shading schemes. 999 maximum
c Scheme no., eave proj., eave offset, pergola proj, pergola offset, pergola shading factors
c         EaveP EaveO PergP PergO
  1 20  1  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  1.00  1.00
  1 20  2  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  1.00  1.00
  1 20  3  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  1.00  1.00
  1 20  4  0.71  0.34  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  1.00  1.00
  1 20  5  0.71  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
  1.00  1.00
c
c Vertical shading schemes. 999 maximum
c Left proj., left offset, right proj., right offset
c         LeftP LeftORightPRightO
c
c Screen schemes. 20 maximum
c Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
                                        Page 1
```

Figure A5.13 – Scratch file page 1: As-built fabric - Unenclosed-perimeter platform-floored test cell

```
                                        SCRATCH TC1 as built.txt
C       Height width  Dist  OffH  OffV
 1 22  1    7.0  44.0  21.5  54.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  2    3.6  12.0  48.5  28.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  3    3.6  37.0  65.0  17.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  4    7.0  26.0  23.5  -8.5  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  5    4.2  48.0  21.5 -48.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  6    4.2  48.0  21.5 -48.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  7   11.0  21.0  32.5  -4.5  -1.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  8   11.0  21.0  32.5  -4.5  -1.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  9    3.6   7.0   7.5  -1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 10    3.6   7.0   7.5  -1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23       10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26        3   2.5
CCCC
```

SCRATCH TC1 as built.txt

```
C
C
C
C Zone  1
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B wsRed  Type EstSG
 3  1         Test cell  75.3  0.023 0.008 0.68Normal     1
C Windows
C        Height Width  AzimHSSch1HSSch2vShSchScSch1ScSch2ScSch3 Curtn Blind
C Doors
C        Height Width NArea  Azim  AbsE  AbsI EmissHShSchvShSchScSch1ScSch2ScSch3SHGFra
 3  1 28  2.10  0.82  1.72   180  0.50  0.50  1.00      4      0      6      8     10
C OpaqueLouvres
C        Height Width NArea  Azim  AbsE  AbsI EmissHShSchvShSchScSch1ScSch2ScSch3SHGFraLouvre
C Walls
C        Height Width NArea  Azim  AbsE  AbsI EmissHShSchvShSchScSch1ScSch2ScSch3SHGFra
 3  1 21  2.44  5.48 13.37     0  0.50  0.30  1.00      1      0      1      0      0
 3  1 21  2.44  5.48 13.37    90  0.50  0.30  1.00      2      0      2      3      4
 3  1 22  2.44  5.48 11.65   180  0.50  0.30  1.00      3      0      5      7      9
 3  1 21  2.44  5.48 13.37   270  0.50  0.30  1.00      5      0      0      0      0
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  1 41 30.03  0.50
 3  1 83 30.03  0.30     4
C
C        Sensible internal heat gain (watts), [hours 1-12]
 3  1401    30    30    30    30    30    30    30    30    30    30    30    30
C        Sensible internal heat gain (watts), [hours 13-24]
 3  1402    30    30    30    30    30    30    30    30    30    30    30    30
C        Latent internal heat gain (watts), [hours 1-12]
 3  1403     0     0     0     0     0     0     0     0     0     0     0     0
C        Latent internal heat gain (watts), [hours 13-24]
 3  1404     0     0     0     0     0     0     0     0     0     0     0     0
C
C        Heating thermostat settings [hours 1-12]
 3  1501   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C        Heating thermostat settings [hours 13-24]
 3  1502   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C        Cooling thermostat settings [hours 1-12]
 3  1503   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C        Cooling thermostat settings [hours 13-24]
 3  1504   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C
C   Indoor covering closing & opening times, drawing temp, drawing solar for windows
 3  1601    18     7  25.0 200.0
C   Indoor covering closing & opening times, drawing temp, drawing solar for roof windows
 3  1602    18     7  25.0 200.0
C   Outdoor covering drawing temp, drawing solar for windows
 3  1603  22.5  75.0
C   Outdoor covering drawing temp, drawing solar for skylights and roof windows
 3  1604  22.5  75.0
C   Ventilation on & off times, on & off temps, A factor, B factor
 3  1605     0    24  22.5  22.0   0.0   0.0
C
C
C Zone  2
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B wsRed  Type EstSG CeilZ RoofZ REmis
 3  2        Roof Space  19.7  1.26  0.70  0.68RoofSA     1     4     3  0.05
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenshAreashRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  2 52 30.03  0.50     4
 3  2111 52.00  0.50     3
C
C
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B wsRed  Type EstSG                        1
 3  3   Underside of Ro   0.0  0.00  0.00  0.68Normal     1
C Skylights
```


Figure A5.15 – Scratch file page 3: As-built fabric - Unenclosed-perimeter platform-floored test cell

```
                                    SCRATCH_TC1 as built.txt
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  3111 52.00  0.50     2
 3  3112 30.03  0.50     4
 3  3114 12.73  0.50     6
 3  3114 12.73  0.50     8
 3  3114 12.73  0.50    10
 3  3114 12.73  0.50    12
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  4   Top of Ceilings   0.0  0.00   0.00  0.68Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  4 53 30.03  0.50     1
 3  4 82 30.03  0.50     2
 3  4112 30.03  0.50     3
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG  BotZ
 3  5     Air Gap Top 1   0.0  0.00   0.00  0.68AirGpT     1     6                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  5 31 12.73     0    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  5113 12.73  0.50     6
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  6     Air Gap Bot 1   0.0  0.00   0.00  0.68Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  6114 12.73  0.50     3
 3  6113 12.73  0.50     5
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG  BotZ
 3  7     Air Gap Top 2   0.0  0.00   0.00  0.68AirGpT     1     8                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  7 31 12.73    90    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  7113 12.73  0.50     8
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  8     Air Gap Bot 2   0.0  0.00   0.00  0.68Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  8114 12.73  0.50     3
 3  8113 12.73  0.50     7
C
C

                                    Page 4
```

Figure A5.16 – Scratch file page 4: As-built fabric - Unenclosed-perimeter platform-floored test cell

```
                                SCRATCH TC1 as built.txt
C Zone  9
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG  BotZ                  1
 3  9     Air Gap Top 3   0.0  0.00  0.00  0.68AirGpT     1    10
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  9 31 12.73   180    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  9113 12.73  0.50    10
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG                        1
 3 10     Air Gap Bot 3   0.0  0.00  0.00  0.68Normal     1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 10114 12.73  0.50     3
 3 10113 12.73  0.50     9
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG  BotZ                  1
 3 11     Air Gap Top 4   0.0  0.00  0.00  0.68AirGpT     1    12
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 11 31 12.73   270    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 11113 12.73  0.50    12
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol      A      B WsRed  Type EstSG                        1
 3 12     Air Gap Bot 4   0.0  0.00  0.00  0.68Normal     1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 12114 12.73  0.50     3
 3 12113 12.73  0.50    11
C
 9
```

Figure A5.17 – Scratch file page 5: As-built fabric - Unenclosed-perimeter platform-floored test cell

SCRATCH TC2 Blind - Blind.txt

```
CCCC
```

```
                                SCRATCH TC2 Blind - Blind.txt
 1.00  1.00
 1 20 10  0.58  2.40  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
C
C Vertical shading schemes. 999 maximum
C Left proj., left offset, right proj., right offset
C        LeftP LeftORightPRightO
C
C Screen schemes. 20 maximum
C Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
C       Height Width  Dist  OffH  OffV
 1 22  1   7.0  44.0  35.5  56.6  -1.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  2   4.2   5.8   7.5   1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  3   3.6  37.0  66.0   3.5  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  4   3.6  12.0  50.0  15.0  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  5   7.0  26.0  25.0 -22.5  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  6   6.0   9.0  17.0  13.5  -0.6  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  7   6.0   9.0  17.0  13.5  -0.6  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  8  11.0  21.0  19.0  -6.0   1.4  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  9  11.0  21.0  19.0  -6.0   1.4  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22 10   3.6   7.0   7.5  -1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 11   3.6   7.0   7.5  -1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 12   7.0  44.0  35.5  55.6  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 13   4.2   5.8   7.5   1.0  -0.4  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 14   3.6  37.0  66.0   3.5   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 15   3.6  12.0  50.0  15.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 16   7.0  26.0  25.0 -22.5   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 17   6.0   9.0  17.0  13.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22 18   6.0   9.0  17.0  13.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22 19  11.0  21.0  19.0  -6.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22 20  11.0  21.0  19.0  -6.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22 21   3.6   7.0   7.5  -1.0   0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22 22   3.6   7.0   7.5  -1.0   0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23       10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26        3   2.5
CCCC
```

```
                                SCRATCH TC2 Blind - Blind.txt
C
 2N 31ROOF: Metal deck-Skin-Upper  Area:   63.6
 2 31    45   1999   0
C
 2N 41FLOOR: Ground  Area:    0.0
 2 41   902   0999   0
C
 2N 51FLOOR:Roofspace - ToBelow  Area:    0.0
 2 51   999   0908   0999   0
 2N 52FLOOR:Subfloor - ToAbove  Area:   30.0
 2 52   999   0913   0999   0
 2N 53FLOOR:Plasterboard 10 mm & R4.0 unbridged-Lower  Area:   30.0
 2 53    34  10217 176999   0
 2N 54FLOOR:Particle board deck & no carpet-Upper  Area:    0.0
 2 54   999   0 32  19
 2N 55FLOOR:Ground  Area:    0.0
 2 55   902   0999   0
C
 2N 81CEILING:Roofspace - ToBelow  Area:    0.0
 2 81   999   0908   0999   0
 2N 82CEILING:Subfloor - ToAbove  Area:   30.0
 2 82   999   0913   0999   0
 2N 83CEILING:Plasterboard 10 mm & R4.0 unbridged-Lower  Area:   30.0
 2 83   999   0217 176 34  10
 2N 84CEILING:Particle board deck & no carpet-Upper  Area:    0.0
 2 84    32  19999   0
 2N 85CEILING:Ground  Area:    0.0
 2 85   999   0902   0
C
 2N111INTERNAL WALL: Roofspace - ToAbove  Area:   52.0
 2111   999   0909   0999   0
 2N112INTERNAL WALL: Roofspace - RadiantReflective  Area:   30.0
 2112   999   0911   0999   0
 2N113INTERNAL WALL: Subfloor - ToBelow  Area:   30.0
 2113   999   0912   0999   0
 2N114INTERNAL WALL: Subfloor - RadiantNonReflective  Area:   30.0
 2114   999   0914   0999   0
 2N115INTERNAL WALL: Metal deck-Skin-AirGap  Area:   63.6
 2115   999   0707  40999   0
 2N116INTERNAL WALL: Metal deck-Skin-Lower  Area:   63.6
 2116   999   0998   0999   0
C
C
C
C
CCCC
```

```
                                SCRATCH TC2 Blind - Blind.txt
 3  1402    30    30    30    30    30    30    30    30    30    30    30    30
C       Latent internal heat gain (watts), [hours 1-12]
 3  1403     0     0     0     0     0     0     0     0     0     0     0     0
C       Latent internal heat gain (watts), [hours 13-24]
 3  1404     0     0     0     0     0     0     0     0     0     0     0     0
C
C       Heating thermostat settings [hours 1-12]
 3  1501   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Heating thermostat settings [hours 13-24]
 3  1502   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 1-12]
 3  1503   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 13-24]
 3  1504   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C
C   Indoor covering closing & opening times, drawing temp, drawing solar for windows
 3  1601    18     7  25.0 200.0
C   Indoor covering closing & opening times, drawing temp, drawing solar for roof windows
 3  1602    18     7  25.0 200.0
C   Outdoor covering drawing temp, drawing solar for windows
 3  1603  22.5  75.0
C   Outdoor covering drawing temp, drawing solar for skylights and roof windows
 3  1604  22.5  75.0
C   Ventilation on & off times, on & off temps, A factor, B factor
 3  1605     0    24  22.5  22.0   0.0   0.0
C
C
C Zone  2
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG CeilZ RoofZ REmis
 3  2         Roof Space  19.7  2.00  1.00  0.67RoofSA     1     5     4  0.05
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  2 51 30.03  0.50     5
 3  2111 52.00  0.50     4
C
C
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG FlorZ GrndZ REmis
 3  3          Sub Floor  20.0  0.67  1.56  0.67SubFlA     1     6     7  0.82
C Windows
C       Height Width  AzimHSSch1HSSch2VShSchScSch1ScSch2ScSch3 Curtn Blind
C Doors
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  3 29  0.60  0.72  0.43   180  0.50  0.50  1.00     9     0    18    20    22
C OpaqueLouvres
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFraLouvre
C Walls
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  3 21  0.60  5.78  3.47     0  0.50  0.50  1.00     6     0    12    13     0
 3  3 21  0.60  5.78  3.47    90  0.50  0.50  1.00     7     0    14    15    16
 3  3 21  0.60  5.78  3.04   180  0.50  0.50  1.00     8     0    17    19    21
 3  3 21  0.60  5.78  3.47   270  0.50  0.50  1.00    10     0     0     0     0
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  3 82 30.03  0.50     6
 3  3113 30.03  0.50     7
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG                      1
 3  4   Underside of Ro   0.0  0.00  0.00  0.67Normal     1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
                                        Page 4
```

Figure A5.21 – Scratch file page 4: Default fabric - Enclosed-perimeter platform-floored test cell

SCRATCH TC2 Blind - Blind.txt

```
 3  4111 52.00  0.50     2
 3  4112 30.03  0.50     5
 3  4116 12.73  0.50     9
 3  4116 12.73  0.50    11
 3  4116 12.73  0.50    13
 3  4116 12.73  0.50    15
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  5   Top of Ceilings   0.0  0.00  0.00  0.67Normal     1                          1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  5 53 30.03  0.50     1
 3  5 81 30.03  0.50     2
 3  5112 30.03  0.50     4
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  6   Underside of fl   0.0  0.00  0.00  0.67Normal     1                          1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  6 52 30.03  0.50     3
 3  6 84 30.03  0.50     1
 3  6114 30.03  0.50     7
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  7     Top of ground   0.0  0.00  0.00  0.67Normal     1                          1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  7 41 30.03  0.50
 3  7113 30.03  0.50     3
 3  7114 30.03  0.50     6
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG  BotZ
 3  8     Air Gap Top 1   0.0  0.00  0.00  0.67AirGpT     1     9                    1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsI  AbsI Emiss SHGFra
 3  8 31 12.73     0    21  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  8115 12.73  0.50     9
C
C
C Zone  9
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG
 3  9     Air Gap Bot 1   0.0  0.00  0.00  0.67Normal     1                          1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  9116 12.73  0.50     4
 3  9115 12.73  0.50     8
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG  BotZ
 3 10     Air Gap Top 2   0.0  0.00  0.00  0.67AirGpT     1    11                    1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
```

Page 5

Figure A5.22 – Scratch file page 5: Default fabric - Enclosed-perimeter platform-floored test cell

SCRATCH TC2 Blind - Blind.txt

```
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 10 31 12.73    90    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 10115 12.73  0.50    11
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG                      1
 3 11     Air Gap Bot 2   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 11116 12.73  0.50     4
 3 11115 12.73  0.50    10
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG  BotZ                1
 3 12     Air Gap Top 3   0.0  0.00  0.00  0.67AirGpT     1    13                 1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 12 31 12.73   180    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 12115 12.73  0.50    13
C
C
C Zone 13
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG                      1
 3 13     Air Gap Bot 3   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 13116 12.73  0.50     4
 3 13115 12.73  0.50    12
C
C
C Zone 14
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG  BotZ                1
 3 14     Air Gap Top 4   0.0  0.00  0.00  0.67AirGpT     1    15                 1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 14 31 12.73   270    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 14115 12.73  0.50    15
C
C
C Zone 15
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol     A     B WsRed  Type EstSG                      1
 3 15     Air Gap Bot 4   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 15116 12.73  0.50     4
 3 15115 12.73  0.50    14
C
 9
```

Page 6

Figure A5.23 – Scratch file page 6: Default fabric - Enclosed-perimeter platform-floored test cell

```
                                        SCRATCH TC2 as built.txt
CCCC
```

```
                                    SCRATCH TC2 as built.txt
 1.00  1.00
 1 20 10  0.58  2.40  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
C
C Vertical shading schemes. 999 maximum
C Left proj., left offset, right proj., right offset
C        LeftP LeftORightPRightO
C
C Screen schemes. 20 maximum
C Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
C       Height Width  Dist  OffH  OffV
 1 22  1   7.0  44.0  35.5  56.6  -1.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22  2   4.2   5.8   7.5   1.0  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22  3   3.6  37.0  66.0   3.5  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22  4   3.6  12.0  50.0  15.0  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22  5   7.0  26.0  25.0 -22.5  -0.6  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22  6   6.0   9.0  17.0  13.5  -0.6  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
0.95  0.95  0.95
 1 22  7   6.0   9.0  17.0  13.5  -0.6  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
0.95  0.95  0.95
 1 22  8  11.0  21.0  19.0  -6.0   1.4  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
0.50  0.70  0.95
 1 22  9  11.0  21.0  19.0  -6.0   1.4  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
0.50  0.70  0.95
 1 22 10   3.6   7.0   7.5  -1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 11   3.6   7.0   7.5  -1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 12   7.0  44.0  35.5  55.6  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 13   4.2   5.8   7.5   1.0  -0.4  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 14   3.6  37.0  66.0   3.5   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 15   3.6  12.0  50.0  15.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 16   7.0  26.0  25.0 -22.5   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 17   6.0   9.0  17.0  13.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
0.95  0.95  0.95
 1 22 18   6.0   9.0  17.0  13.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
0.95  0.95  0.95
 1 22 19  11.0  21.0  19.0  -6.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
0.50  0.70  0.95
 1 22 20  11.0  21.0  19.0  -6.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
0.50  0.70  0.95
 1 22 21   3.6   7.0   7.5  -1.0   0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
 1 22 22   3.6   7.0   7.5  -1.0   0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
1.00  1.00  1.00
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23       10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26        3   2.5
CCCC
```

```
                                    SCRATCH TC2 as built.txt
 2N 29EXTERNAL DOOR: Sub Floor Door  Area:    0.4
 2 29    35  12
C
 2N 31ROOF: Metal deck-Skin-Upper  Area:   63.6
 2 31    45   1999   0
C
 2N 41FLOOR: Ground  Area:    0.0
 2 41   902   0999   0
C
 2N 51FLOOR:Roofspace - ToBelow  Area:    0.0
 2 51   999   0908   0999   0
 2N 52FLOOR:Subfloor - ToAbove  Area:   30.0
 2 52   999   0913   0999   0
 2N 53FLOOR:Plasterboard 10 mm bridged-Lower  Area:   30.0
 2 53    34  10210 158999   0
 2N 54FLOOR:Particle Board Floor Bridged-Upper  Area:    0.0
 2 54   999   0 32  21
 2N 55FLOOR:Ground  Area:    0.0
 2 55   902   0999   0
C
 2N 81CEILING:Roofspace - ToBelow  Area:    0.0
 2 81   999   0908   0999   0
 2N 82CEILING:Subfloor - ToAbove  Area:   30.0
 2 82   999   0913   0999   0
 2N 83CEILING:Plasterboard 10 mm bridged-Lower  Area:   30.0
 2 83   999   0210 158 34  10
 2N 84CEILING:Particle Board Floor Bridged-Upper  Area:    0.0
 2 84    32  21999   0
 2N 85CEILING:Ground  Area:    0.0
 2 85   999   0902   0
C
 2N111INTERNAL WALL: Roofspace - ToAbove  Area:   52.0
 2111   999   0909   0999   0
 2N112INTERNAL WALL: Roofspace - RadiantReflective  Area:   30.0
 2112   999   0911   0999   0
 2N113INTERNAL WALL: Subfloor - ToBelow  Area:   30.0
 2113   999   0912   0999   0
 2N114INTERNAL WALL: Subfloor - RadiantNonReflective  Area:   30.0
 2114   999   0914   0999   0
 2N115INTERNAL WALL: Metal deck-Skin-AirGap  Area:   63.6
 2115   999   0707  40999   0
 2N116INTERNAL WALL: Metal deck-Skin-Lower  Area:   63.6
 2116   999   0998   0999   0
C
C
C
C
CCCC
```

```
                                    SCRATCH TC2 as built.txt
 3  1401    30    30    30    30    30    30    30    30    30    30    30    30
C       Sensible internal heat gain (watts), [hours 13-24]
 3  1402    30    30    30    30    30    30    30    30    30    30    30    30
C       Latent internal heat gain (watts), [hours 1-12]
 3  1403     0     0     0     0     0     0     0     0     0     0     0     0
C       Latent internal heat gain (watts), [hours 13-24]
 3  1404     0     0     0     0     0     0     0     0     0     0     0     0
C
C       Heating thermostat settings [hours 1-12]
 3  1501   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Heating thermostat settings [hours 13-24]
 3  1502   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 1-12]
 3  1503   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C       Cooling thermostat settings [hours 13-24]
 3  1504   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0   0.0
C
C   Indoor covering closing & opening times, drawing temp, drawing solar for windows
 3  1601    18     7  25.0 200.0
C   Indoor covering closing & opening times, drawing temp, drawing solar for roof windows
 3  1602    18     7  25.0 200.0
C   Outdoor covering drawing temp, drawing solar for windows
 3  1603  22.5  75.0
C   Outdoor covering drawing temp, drawing solar for skylights and roof windows
 3  1604  22.5  75.0
C   Ventilation on & off times, on & off temps, A factor, B factor
 3  1605     0    24  22.5  22.0   0.0   0.0
C
C
C Zone  2
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG CeilZ RoofZ REmis
 3  2        Roof Space  19.7  0.40  0.258 0.67RoofSA     1     5     4  0.05
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  2 51 30.03  0.50     5
 3  2111 52.00  0.50     4
C
C
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG FlorZ GrndZ REmis
 3  3         Sub Floor  20.0  3.292 1.91  0.67SubFlA     1     6     7  0.82
C Windows
C       Height Width  AzimHSSch1HSSch2VShSchScSch1ScSch2ScSch3 Curtn Blind
C Doors
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  3 29  0.60  0.72  0.43   180  0.50  0.50  1.00     9     0    18    20    22
C OpaqueLouvres
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFraLouvre
C Walls
C       Height Width NArea  Azim  AbsE  AbsI EmissHShSchVShSchScSch1ScSch2ScSch3SHGFra
 3  3 21  0.60  5.78  3.47     0  0.50  0.50  1.00     6     0    12    13     0
 3  3 21  0.60  5.78  3.47    90  0.50  0.50  1.00     7     0    14    15    16
 3  3 21  0.60  5.78  3.04   180  0.50  0.50  1.00     8     0    17    19    21
 3  3 21  0.60  5.78  3.47   270  0.50  0.50  1.00    10     0     0     0     0
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  3 82 30.03  0.50     6
 3  3113 30.03  0.50     7
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG                          1
 3  4   Underside of Ro   0.0  0.00  0.00  0.67Normal     1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
                                      Page 4
```

Figure A5.27 – Scratch file page 4: As-built fabric - Enclosed-perimeter platform-floored test cell

```
                                    SCRATCH TC2 as built.txt
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  4111 52.00  0.50     2
 3  4112 30.03  0.50     5
 3  4116 12.73  0.50     9
 3  4116 12.73  0.50    11
 3  4116 12.73  0.50    13
 3  4116 12.73  0.50    15
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG                      1
 3  5   Top of Ceilings   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  5 53 30.03  0.50     1
 3  5 81 30.03  0.50     2
 3  5112 30.03  0.50     4
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG                      1
 3  6   Underside of fl   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  6 52 30.03  0.50     3
 3  6 84 30.03  0.50     1
 3  6114 30.03  0.50     7
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG                      1
 3  7     Top of ground   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  7 41 30.03  0.50
 3  7113 30.03  0.50     3
 3  7114 30.03  0.50     6
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG  BotZ                1
 3  8     Air Gap Top 1   0.0  0.00  0.00  0.67AirGpT     1     9                 1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  8 31 12.73     0    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  8115 12.73  0.50     9
C
C
C Zone  9
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG                      1
 3  9     Air Gap Bot 1   0.0  0.00  0.00  0.67Normal     1                       1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  9116 12.73  0.50     4
 3  9115 12.73  0.50     8
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG  BotZ                1
 3 10     Air Gap Top 2   0.0  0.00  0.00  0.67AirGpT     1    11                 1
                                      Page 5
```

Figure A5.28 – Scratch file page 5: As-built fabric - Enclosed-perimeter platform-floored test cell

```
                                SCRATCH TC2 as built.txt
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 10 31 12.73    90    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 10115 12.73  0.50    11
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG                      1
 3 11     Air Gap Bot 2   0.0  0.00  0.00  0.67Normal     1                      1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 11116 12.73  0.50     4
 3 11115 12.73  0.50    10
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG  BotZ                 1
 3 12     Air Gap Top 3   0.0  0.00  0.00  0.67AirGpT     1    13                1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 12 31 12.73   180    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 12115 12.73  0.50    13
C
C
C Zone 13
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG                      1
 3 13     Air Gap Bot 3   0.0  0.00  0.00  0.67Normal     1                      1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 13116 12.73  0.50     4
 3 13115 12.73  0.50    12
C
C
C Zone 14
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG  BotZ                 1
 3 14     Air Gap Top 4   0.0  0.00  0.00  0.67AirGpT     1    15                1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 14 31 12.73   270    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 14115 12.73  0.50    15
C
C
C Zone 15
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG                      1
 3 15     Air Gap Bot 4   0.0  0.00  0.00  0.67Normal     1                      1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 15116 12.73  0.50     4
 3 15115 12.73  0.50    14
C
 9

                                    Page 6
```

Figure A5.29 – Scratch file page 6: As-built fabric - Enclosed-perimeter platform-floored test cell

```
                                        SCRATCH TC3 Blind - Blind.txt
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C
C  19/10/09 13:54
C  Data type 1: Project data
C
 1  1                                              19/10/09            20030000000000
 1  2   C:\Program Files\AccuRate aust\WEATHER\CLIMAT23.txt
 1  3    -41.4 147.1 150.0
 1  4  1C:\Program Files\AccuRate aust\LIB\ALL_WINDOWS.BWG
 1  7   output.txt
 1  9   C:\Program Files\AccuRate aust\Temperatures\2009-11-02 Test Cell 3 unbridged.tem
 1 10   energy.txt
 1 11   airflow.txt
C
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C Basic data for ventilation modelling and numerics
C
C         MaxItV  MaxIVI   ConvV  ConvVI    UrfV  RungeK  MaxItT   ConvT  MaxItG   ConvG
UrfT
 1 12        100     100 0.00100 0.01000    0.20       5     100 0.10000     100 0.00100
0.20
C Cp data
 1 13999 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50
C Shielding factor
 1 14     0.74
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C Ground model data. Ground reflectance, slab-on-ground area, perimeter, wall thickness,
cond., diffusivity, edge insul., cond. floor area
 1 15      0.2    30    22   0.2   1.5   4.6  0.00  30.0
C
C Curtain data for windows (AddedR, Trans, Abs). 20 maximum
 1 16  1 0.000 0.510 0.200
 1 16  2 0.030 0.250 0.350
 1 16  3 0.055 0.100 0.400
 1 16  4 0.110 0.250 0.350
 1 16  5 0.330 0.100 0.400
 1 16  6 0.030 0.200 0.300
 1 16  7 0.000 0.200 0.300
C
C Curtain data for roof windows (AddedR, Trans, Abs). 20 maximum
 1 17  1  0.03  0.20  0.30
C
C Outdoor blinds shading factor for windows. 999 maximum
 1 18  1 0.300
 1 18  2 0.300
 1 18  3 0.240
 1 18  4 0.200
 1 18  5 0.150
 1 18  6 0.600
 1 18  7 0.400
C
C Outdoor blinds shading factor for skylights and roof windows. 999 maximum
 1 19  1 0.800
 1 19  2 0.600
 1 19  3 0.400
 1 19  4 0.200
 1 19  5 0.000
C
C Horizontal shading schemes. 999 maximum
C Scheme no., eave proj., eave offset, pergola proj, pergola offset, pergola shading factors
C         EaveP EaveO PergP PergO
 1 20  1  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  2  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  3  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  4  0.58  0.34  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  5  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
C
C Vertical shading schemes. 999 maximum
C Left proj., left offset, right proj., right offset
C         LeftP LeftORightPRightO
C
C Screen schemes. 20 maximum
                                        Page 1
```

Figure A5.30 – Scratch file page 1: Default fabric – Concrete slab-on-ground floored test cell

```
                                SCRATCH TC3 Blind - Blind.txt
C Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
C       Height Width  Dist  OffH  OffV
 1 22  1   7.0  44.0  49.0  56.6  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  2   3.6   6.3   7.5   1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  3   3.6  37.0  67.0 -10.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  4   3.6  12.0  51.0   0.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  5  11.0  10.0   6.0   9.5   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  6   6.0   9.0   4.0  12.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  7   6.0   9.0   4.0  12.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  8  11.0  10.0   6.5 -18.0   2.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  9  11.0  10.0   6.5 -18.0   2.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22 10  11.0  10.0   4.5  -7.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22 11  11.0  10.0   4.5  -7.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23       10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26        3   2.5
CCCC
```

SCRATCH TC3 Blind - Blind.txt

```
C
C
C
CCCC
```

SCRATCH TC3 Blind - Blind.txt

```
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  3        GroundZone   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  3 41 30.03  0.50
 3  3 82 30.03  0.50     1
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  4   Underside of Ro   0.0  0.00  0.00  0.64Normal     1                        1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  4111 52.00  0.50     2
 3  4112 30.03  0.50     5
 3  4114 12.73  0.50     7
 3  4114 12.73  0.50     9
 3  4114 12.73  0.50    11
 3  4114 12.73  0.50    13
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  5   Top of Ceilings   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  5 54 30.03  0.50     1
 3  5 83 30.03  0.50     2
 3  5112 30.03  0.50     4
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG  BotZ
 3  6     Air Gap Top 1   0.0  0.00  0.00  0.64AirGpT     1     7                   1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  6 31 12.73     0    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  6113 12.73  0.50     7
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG
 3  7     Air Gap Bot 1   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  7114 12.73  0.50     4
 3  7113 12.73  0.50     6
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                  Name   Vol      A      B WsRed  Type EstSG  BotZ
 3  8     Air Gap Top 2   0.0  0.00  0.00  0.64AirGpT     1     9                   1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
                                    Page 4
```

Figure A5.33 – Scratch file page 4: Default fabric – Concrete slab-on-ground floored test cell

```
                                SCRATCH TC3 Blind - Blind.txt
 3  8 31 12.73    90    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  8113 12.73  0.50     9
C
C
C Zone  9
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG
 3  9     Air Gap Bot 2   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3  9114 12.73  0.50     4
 3  9113 12.73  0.50     8
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG  BotZ
 3 10     Air Gap Top 3   0.0  0.00  0.00  0.64AirGpT     1    11                 1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 10 31 12.73   180    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 10113 12.73  0.50    11
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG
 3 11     Air Gap Bot 3   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 11114 12.73  0.50     4
 3 11113 12.73  0.50    10
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG  BotZ
 3 12     Air Gap Top 4   0.0  0.00  0.00  0.64AirGpT     1    13                 1
C Skylights
C         Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C         Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 12 31 12.73   270    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 12113 12.73  0.50    13
C
C
C Zone 13
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                 Name   Vol     A     B WsRed  Type EstSG
 3 13     Air Gap Bot 4   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C         Area  AbsI  AdjZ  SHGF
 3 13114 12.73  0.50     4
 3 13113 12.73  0.50    12
C
 9
```

Page 5

Figure A5.34 – Scratch file page 5: Default fabric – Concrete slab-on-ground floored test cell

```
                                        SCRATCH TC3 as built.txt
cccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C
C  19/10/09 16:09
C  Data type 1: Project data
C
 1  1                                              19/10/09            20030000000000
 1  2   C:\Program Files\AccuRate aust\WEATHER\CLIMAT23.txt
 1  3    -41.4 147.1 150.0
 1  4  1C:\Program Files\AccuRate aust\LIB\ALL_WINDOWS.BWG
 1  7   output.txt
 1  9   C:\Program Files\AccuRate aust\Temperatures\2009-11-02 Test Cell 3 bridged.tem
 1 10   energy.txt
 1 11   airflow.txt
C
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C Basic data for ventilation modelling and numerics
C
C         MaxItV  MaxIVI   ConvV  ConvVI    UrfV  RungeK  MaxItT   ConvT  MaxItG   ConvG
UrfT
 1 12        100     100 0.00100 0.01000    0.20       5     100 0.10000     100 0.00100
0.20
C Cp data
 1 13999 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50 -0.50
C Shielding factor
 1 14     0.74
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
C Ground model data. Ground reflectance, slab-on-ground area, perimeter, wall thickness,
cond., diffusivity, edge insul., cond. floor area
 1 15      0.2     30    22   0.2   1.5   4.6  0.00  30.0
C
C Curtain data for windows (AddedR, Trans, Abs). 20 maximum
 1 16  1 0.000 0.510 0.200
 1 16  2 0.030 0.250 0.350
 1 16  3 0.055 0.100 0.400
 1 16  4 0.110 0.250 0.350
 1 16  5 0.330 0.100 0.400
 1 16  6 0.030 0.200 0.300
 1 16  7 0.000 0.200 0.300
C
C Curtain data for roof windows (AddedR, Trans, Abs). 20 maximum
 1 17  1  0.03  0.20  0.30
C
C Outdoor blinds shading factor for windows. 999 maximum
 1 18  1 0.300
 1 18  2 0.300
 1 18  3 0.240
 1 18  4 0.200
 1 18  5 0.150
 1 18  6 0.600
 1 18  7 0.400
C
C Outdoor blinds shading factor for skylights and roof windows. 999 maximum
 1 19  1 0.800
 1 19  2 0.600
 1 19  3 0.400
 1 19  4 0.200
 1 19  5 0.000
C
C Horizontal shading schemes. 999 maximum
C Scheme no., eave proj., eave offset, pergola proj, pergola offset, pergola shading factors
C         EaveP EaveO PergP PergO
 1 20  1  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  2  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  3  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  4  0.58  0.34  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
 1 20  5  0.58  0.00  0.00  0.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00
C
C Vertical shading schemes. 999 maximum
C Left proj., left offset, right proj., right offset
C         LeftP LeftORightPRightO
C
C Screen schemes. 20 maximum
                                        Page 1
```

Figure A5.35 – Scratch file page 1: As-built fabric – Concrete slab-on-ground floored test cell

```
                                    SCRATCH TC3 as built.txt
C Scheme no., screen height, width, distance, offset horiz, offset vert, shading factors
C       Height Width  Dist  OffH  OffV
 1 22  1   7.0  44.0  49.0  56.6  -1.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  2   3.6   6.3   7.5   1.0  -0.3  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  3   3.6  37.0  67.0 -10.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  4   3.6  12.0  51.0   0.0   0.0  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00  1.00
 1.00  1.00  1.00
 1 22  5  11.0  10.0   6.0   9.5   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22  6   6.0   9.0   4.0  12.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  7   6.0   9.0   4.0  12.5   0.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  8  11.0  10.0   6.5 -18.0   2.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22  9  11.0  10.0   6.5 -18.0   2.0  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95  0.95
 0.95  0.95  0.95
 1 22 10  11.0  10.0   4.5  -7.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
 1 22 11  11.0  10.0   4.5  -7.0   2.0  0.95  0.95  0.70  0.50  0.30  0.20  0.15  0.15  0.20
 0.50  0.70  0.95
C
C  Number of repeats of day 1, repeat flag, starting temperature, grid size for shading
calculations
 1 23        10     0 -99.0    40
C
C  Stickiness period for controlled openings, Cooling thermostat leeway
 1 26         3   2.5
CCCC
```

```
                                        SCRATCH TC3 as built.txt
 2114   999   0998   0999   0
C
C
C
C
CCCC
```

```
                                SCRATCH TC3 as built.txt
C
C
C Zone  3
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG
 3  3         GroundZone   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  3 41 30.03  0.50
 3  3 82 30.03  0.50     1
C
C
C Zone  4
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG
 3  4   Underside of Ro   0.0  0.00  0.00  0.64Normal     1                        1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  4111 52.00  0.50     2
 3  4112 30.03  0.50     5
 3  4114 12.73  0.50     7
 3  4114 12.73  0.50     9
 3  4114 12.73  0.50    11
 3  4114 12.73  0.50    13
C
C
C Zone  5
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG
 3  5   Top of Ceilings   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  5 54 30.03  0.50     1
 3  5 83 30.03  0.50     2
 3  5112 30.03  0.50     4
C
C
C Zone  6
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG  BotZ
 3  6     Air Gap Top 1   0.0  0.00  0.00  0.64AirGpT     1     7                   1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  6 31 12.73     0    23  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  6113 12.73  0.50     7
C
C
C Zone  7
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG
 3  7     Air Gap Bot 1   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  7114 12.73  0.50     4
 3  7113 12.73  0.50     6
C
C
C Zone  8
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                    Name   Vol     A     B WsRed  Type EstSG  BotZ
 3  8     Air Gap Top 2   0.0  0.00  0.00  0.64AirGpT     1     9                   1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
                                    Page 4
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Figure A5.38 – Scratch file page 4: As-built fabric – Concrete slab-on-ground floored test cell

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                                    SCRATCH TC3 as built.txt
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3  8 31 12.73    90     25  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  8113 12.73  0.50     9
C
C
C Zone  9
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG
 3  9     Air Gap Bot 2   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3  9114 12.73  0.50     4
 3  9113 12.73  0.50     8
C
C
C Zone 10
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG  BotZ
 3 10     Air Gap Top 3   0.0  0.00  0.00  0.64AirGpT     1    11                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 10 31 12.73   180     25  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 10113 12.73  0.50    11
C
C
C Zone 11
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG
 3 11     Air Gap Bot 3   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 11114 12.73  0.50     4
 3 11113 12.73  0.50    10
C
C
C Zone 12
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG  BotZ
 3 12     Air Gap Top 4   0.0  0.00  0.00  0.64AirGpT     1    13                  1
C Skylights
C          Area  Azim Slope ShadI ShadEZonlit ShLenShAreaShRefl ShRes  Diff VArea VType
C Roofs
C          Area  Azim  Slope AbsE  AbsI Emiss SHGFra
 3 12 31 12.73   270     25  0.50  0.50  0.90
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 12113 12.73  0.50    13
C
C
C Zone 13
C
C Name, volume, infiltration data, wind speed reduction factor, type, SHG dist. fractions
C                   Name   Vol     A     B WsRed  Type EstSG
 3 13     Air Gap Bot 4   0.0  0.00  0.00  0.64Normal     1                        1
C Floors, Ceilings, Partitions
C          Area  AbsI  AdjZ  SHGF
 3 13114 12.73  0.50     4
 3 13113 12.73  0.50    12
C
 9

                                        Page 5
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Figure A5.39 – Scratch file page 4: As-built fabric – Concrete slab-on-ground floored test cell

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